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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/644,014 | 08/20/2003 | Sung-Won Bae | P56936 | 4882 |
| 7590 | 06/14/2005 | | EXAMINER | |
| Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005 | | | ZIMMERMAN, GLENN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2879 | |

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/644,014 | BAE ET AL. |
| | Examiner Glenn Zimmerman | Art Unit 2879 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3,8,18 and 20 is/are rejected.
- 7) Claim(s) 4-7, 9-17, 19 and 20 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 August 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 31. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate

paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

Claim 20 is objected to because of the following informalities: In claim 20 line 1, the examiner suggests changing "member passive" to - - member is passive --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. U.S. Patent 6,882,108.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Kim et al. disclose a plasma display device (**title**), comprising: a plasma display panel (**abstract**); a chassis base (**Fig. 1 base chassis ref. 16**) comprising a plurality of circuit elements (**ref. 14 driving circuit board**) attached to the chassis base; and a regulating member (**rib ref. 16''**) mounted on a surface of the chassis base near a circuit element, the regulating member forming a partial barrier dividing a space within the plasma display device (**See Fig. 1**).

Regarding claim 2, Kim et al. disclose the plasma display device of claim 1, the chassis base being quadrilateral (**Fig. 1 ref. 16**), the regulating member being disposed on an upper area (**choose one of the ref. 16''' in the upper area of the base chassis**) of the chassis base between a top of the display panel and a circuit element, the regulating member being a predetermined distance from the circuit assembly (**Fig. 1 shows predetermined distance**).

Regarding claim 3, Kim et al. disclose the plasma display device of claim 1, the plasma display device comprising a plurality of regulating members (**ribs ref 16''**)

wherein adjacent regulating members are separated from each other by a gap (**Fig. 1 no ref. #**) of a predetermined size, each of the plurality of regulating members corresponding to and being disposed above respective ones of a plurality of circuit elements (**driving circuit board ref. 14**). The examiner notes that size is a relative term, but distance is not.

Regarding claim 18, Kim et al. disclose a plasma display device (**title**), comprising: a plasma display panel (**abstract; ref. 12**); a chassis base (**Fig. 1 base chassis ref. 16**) formed in a quadrilateral shape (**see Fig. 1**), the plasma display panel being supported by the chassis base on one side of the display panel; a plurality of circuit elements (**driving circuit boards ref. 14**) disposed on a side of the chassis base opposite from the side of the chassis base that the plasma display panel (**ref. 12 PDP**) is mounted (**col. 2 lines 11 and 12**), the circuit elements applying electrical signals necessary for driving the plasma display panel; and a regulating member (**rib ref. 16"**) mounted to an upper portion of the chassis base and near one of the plurality of circuit elements, the regulating member dividing a space within the plasma display device and being disposed in such a manner as to cause hot air rising from the plurality of circuit elements (**the two center ref. 14s**) to move in a lateral direction perpendicular to a direction of rising hot air to a location within the plasma display device that is absent of the circuit elements prior to when the hot air emerges from the plasma display device (**see Fig. 1**).

Regarding claim 20, Kim et al. disclose the plasma display device of claim 18, wherein the regulating member passive (**Ribs ref. 16**) and is absent of curves (**Ribs ref. 16**).

Claims 1, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang U.S. Patent 6,198,222.

Regarding claim 1, Chang discloses a plasma display device (**title**), comprising: a plasma display panel (**abstract**); a chassis base (**ref. 32s**) comprising a plurality of circuit elements (**rectangular circuit boards ref. 36**) attached to the chassis base; and a regulating member (**top and bottom beam respectively ref. 28 or ref. 30**) mounted on a surface of the chassis base near a circuit element, the regulating member forming a partial barrier dividing a space within the plasma display device (**ref. 29 or ref. 31**).

Regarding claim 18, Chang discloses a plasma display device (**Fig. 4**), comprising: a plasma display panel (**ref. 12**); a chassis base (**ref. 32**) formed in a quadrilateral shape (**Fig. 3**), the plasma display panel being supported by the chassis base on one side of the display (**Fig. 2**) panel; a plurality of circuit elements (**ref. 36**) disposed on a side of the chassis base opposite from the side of the chassis base that the plasma display panel is mounted (**ref. 36**), the circuit elements applying electrical signals necessary for driving the plasma display panel (**circuit board ref. 36**); and a regulating member (**ref. 28**) mounted to an upper portion of the chassis base and near one of the plurality of circuit elements, the regulating member dividing a space (**one space is ref. 29 and the other is ref. 40**) within the plasma display device and being disposed in such a manner as to cause hot air rising from the plurality of circuit

elements to move in a lateral direction perpendicular to a direction of rising hot air to a location within the plasma display device that is absent of the circuit elements (**Fig. 2**) prior to when the hot air emerges from the plasma display device.

Regarding claim 20, Chang discloses the plasma display device of claim 18, wherein the regulating member passive (**ref. 28 does not move and is passive stationary**) and is absent of curves (**Fig. 3 even the holes are rectangular**).

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Goto et al. Japanese Patent Application Publication 11-242442.

Regarding claim 1, Goto et al. disclose a plasma display device (**paragraph 0001**), comprising: a plasma display panel (**drawing 1 ref. 4 PDP**); a chassis base (**chassis ref. 5, 22, 31, 42 or 51**) comprising a plurality of circuit elements (**circuit board ref. 10, 36A, 36B and 57**) attached to the chassis base; and a regulating ember

(**height ref. 45 or septum ref. 32 or  of Drawing 1**) mounted on a surface of the chassis base near a circuit element, the regulating member forming a partial barrier dividing a space within the plasma display device (**See Fig. 1**).

Regarding claim 2, Goto et al. disclose the plasma display device of claim 1, the chassis base being quadrilateral (**chassis ref. 5, 22, 31, 42 or 51**), the regulating

member being disposed on an upper area (**height ref. 45 or septum ref. 32 or  of Drawing 1**) of the chassis base between a top of the display panel (**from drawing 1 one can see that the PDP sticks out at the edge from the chassis ref. 5 this is also**

chose in Drawing 5A) and a circuit element, the regulating member being a predetermined distance from the circuit assembly (see drawing 1).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe et al. U.S. Patent Application Publication 2002/0159240.

Regarding claim 1, Watanabe et al. disclose a plasma display device (title; abstract), comprising: a plasma display panel (title; abstract); a chassis base (Fig. 8 or 5 ref. 14 chassis) comprising a plurality of circuit elements (paragraph 52) attached to the chassis base; and a regulating member (wall for partitioning each circuit block ref. 14b) mounted on a surface of the chassis base near a circuit element (ref. 24 or ref. 21 driver circuit block or ref. 20 scan driver circuit block or ref. 23 control circuit block), the regulating member forming a partial barrier dividing a space within the plasma display device (See Fig. 8 or 5).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Tsai et al. U.S. Patent 6,633,126.

Regarding claim 1, Tsai et al. disclose a plasma display device (title), comprising: a plasma display panel (title; abstract); a chassis base (Fig. 1 ref. 30) comprising a plurality of circuit elements (ref. 34) attached to the chassis base; and a regulating member (ref. 35 or 301) mounted on a surface of the chassis base near a circuit element (Fig. 1 near is relative), the regulating member forming a partial barrier dividing a space within the plasma display device (Fig. 1).

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Isohata et al. U.S. Patent Application Publication 2002/0153840 A1.

Regarding claim 1, Isohata et al. disclose a plasma display device (**title**), comprising: a plasma display panel (**ref. 1 pdp**); a chassis base (**main frameref, 3**) comprising a plurality of circuit elements (**ref. 5-8**) attached to the chassis base; and a

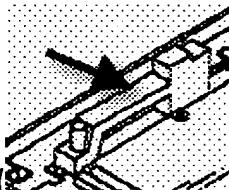
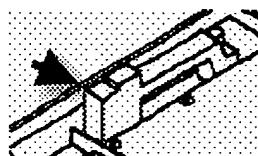


Fig. 1 or 2 and



regulating member (**ref. 6**) mounted on a surface of the chassis base near a circuit element (**Fig. 2 ref. 6**), the regulating member forming a partial barrier dividing a space within the plasma display device (**Fig. 1 or 2**).

Regarding claim 2, Isohata et al. disclose the plasma display device of claim 1, the chassis base being quadrilateral (**Fig. 1 ref. 3**), the regulating member being

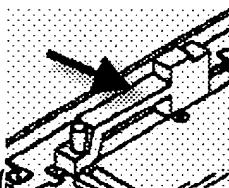
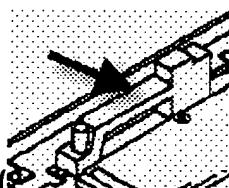


Fig. 1 or 2 upper area) of the chassis

disposed on an upper area (**Fig. 1 or 2 upper area**) of the chassis base between a top of the display panel and a circuit element, the regulating member being a predetermined distance from the circuit assembly (**ref. 4, 5, 6 right side 7 or 8**).

Regarding claim 3, Isohata et al. disclose the plasma display device of claim 1,



the plasma display device comprising a plurality of regulating members (**Fig. 1 or 2 top**) wherein adjacent regulating members are separated from each other by a gap (**Figs. 1 or 2 no ref. #**) of a predetermined size, each of the plurality of regulating members corresponding to and being disposed above respective ones of a plurality of

circuit elements (**driving circuit board ref. 14**). The examiner notes that size is a relative term, but distance is not.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. U.S. Patent Application Publication 2002/0159240.

Regarding claim 8, Watanabe et al. et al. teach all the limitations of claim 8, but fail to teach the regulating member being made of aluminum. Watanabe et al. in the analogous art teach aluminum (**aluminum thermal conductor ref. 12**) for a chassis. Additionally, Watanabe et al. teach incorporation of an aluminum chassis being made of aluminum to improve heat dissipation (paragraph 48).

Consequently it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use aluminum in the wall which is an element of the chassis of Watanabe et al., since such a modification would improve heat dissipation ability of the chassis as taught by Watanabe.

Allowable Subject Matter

Claims 4-7, 9-17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 4, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 4, and specifically a main body comprising a plurality of curves that are integrally combined, the main body extending from a surface of the chassis base to divide the space within the plasma display device could not be found elsewhere in prior art.

Regarding claim 5, claim 5 is allowed for the reasons given in claim 4, because of its dependency status on claim 4.

Regarding claim 6, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 6, and specifically each of the plurality of regulating members comprising: one or more convex section that curve in a direction toward the corresponding circuit element; and two or more concave sections that curve in a direction away from the corresponding circuit element could not be found elsewhere in prior art.

Regarding claim 7, claim 7 is allowed for the reasons given in claim 6, because of its dependency status on claim 6.

Regarding claim 9, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 9, and specifically the regulating member being made of corrugated cardboard could not be found elsewhere in prior art.

Regarding claim 10, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 10, and specifically the main body comprises aperture and non aperture portions disposed alternately along the main body, wherein each non-aperture portion being disposed near a corresponding circuit element and each aperture portion being disposed near a space between two adjacent circuit elements could not be found elsewhere in prior art.

Regarding claims 11, 12 and 16, claims 11, 12 and 16 are allowed for the reasons given in claim 10, because of their dependency status on claim 10.

Regarding claim 13, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 13, and specifically connecting members formed integrally with and at an angle with the main body, wherein the main body comprises first aperture portions formed with second aperture portions in an alternating manner, wherein the first aperture portions are disposed near corresponding ones of the plurality of circuit elements and the second aperture portions

being disposed at locations corresponding to locations between a pair of adjacent circuit elements could not be found elsewhere in prior art.

Regarding claims 14, 15 and 17, claims 14, 15 and 17 are allowed for the reasons given in claim 13, because of their dependency status on claim 13.

Regarding claim 19, the following is an examiner's statement of reasons for allowance: The prior art of record neither shows nor suggests a plasma display device including the combination of all the limitations as set forth in claim 19, and specifically the regulating member being a passive member and being curved could not be found elsewhere in prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kang et al. U.S. Patent Application Publication 2004/0036396 disclose a Plasma Display Device. Kaneko et al. U.S. Patent 6,833,674 disclose Heat-Dissipation Structure of Plasma Display Panel Device. Nomoto et al. U.S. Patent Application Publication 2004/0027073 disclose a Plasma Display Apparatus. Oishi et al. U.S. Patent 6,744,186 disclose a Plasma Display Apparatus. Isohata et al. U.S. Patent 6,288,489 disclose a Plasma Display Device Having a Heat Conductive Plate in the Main Frame. Oishi et al. U.S. Patent 6,373,702 B2 disclose a Cooling Structure and Display Apparatus Containing the Cooling Structure. Morita et al. U.S. Patent

U.S. Patent 5,831,374 disclose a Plasma Display Panel, Method of Fabricating the Same, and Display Apparatus Using the Plasma Display Panel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (571) 272-2466. The examiner can normally be reached on M-W 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Glenn Zimmerman


Vip Patel
Primary Examiner
AU 2879